



# ***Supplier Quality Assurance***

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***Presented By:***

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***Date***

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# Risk

## Planning

- **What to look for**

- Contract: TDP, QA requirements
- QALI: customer interests, mandates
- Contractor production plans?
- Which processes are “make or break”? **Cost/Sch/Perf**

- **Examples of key processes**

Calibration

Purchasing

Welding

Packaging

**Grinding**

Brazing

ECPs

Radiography

Continuity test

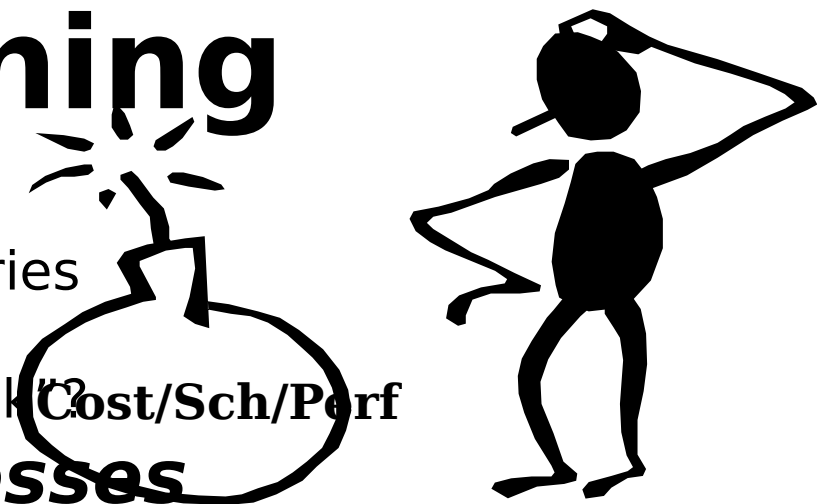
Functional test

Alignment/phasing

Final inspection

- **Examples of key process rationale statements**

- **Grinding** of interface surfaces is critical to weapon system interface
- Customer QALI identified **grinding** as problematic on last procurement
- Improper **grinding** will cause extremely costly weapon



# RAMP - [One Book Chapter Rating]

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CAGE Service Set One Book Chapter  
 0XCY5 Product Support Supplier Quality Assurance - Product Quality

Overall One Book Chapter Ratings - Supplier Quality Assurance - Product Quality

Performance

Schedule

Cost

In Process

In Process

In Process

Narrative

Expand

	Key Process / System Ratings			Ratings			
	Key Process /	Contract	Risk	Per	Sch	Cst	Details
	<del>Calibration</del>						Rate
	Packaging						Rate
	<del>ECPs</del>						Rate
	Functional Test						Rate
	<del>Purchasing</del>						Rate
▶	Grinding						Rate
	Radiography						Rate
	Alignment/phasing						Rate
	Welding						Rate
	Brazing						Rate
	Continuity Testing						Rate
	Final Inspection						Rate
*							

Save

Close

Start

Inbox - Micro...

FAR - Netsca...

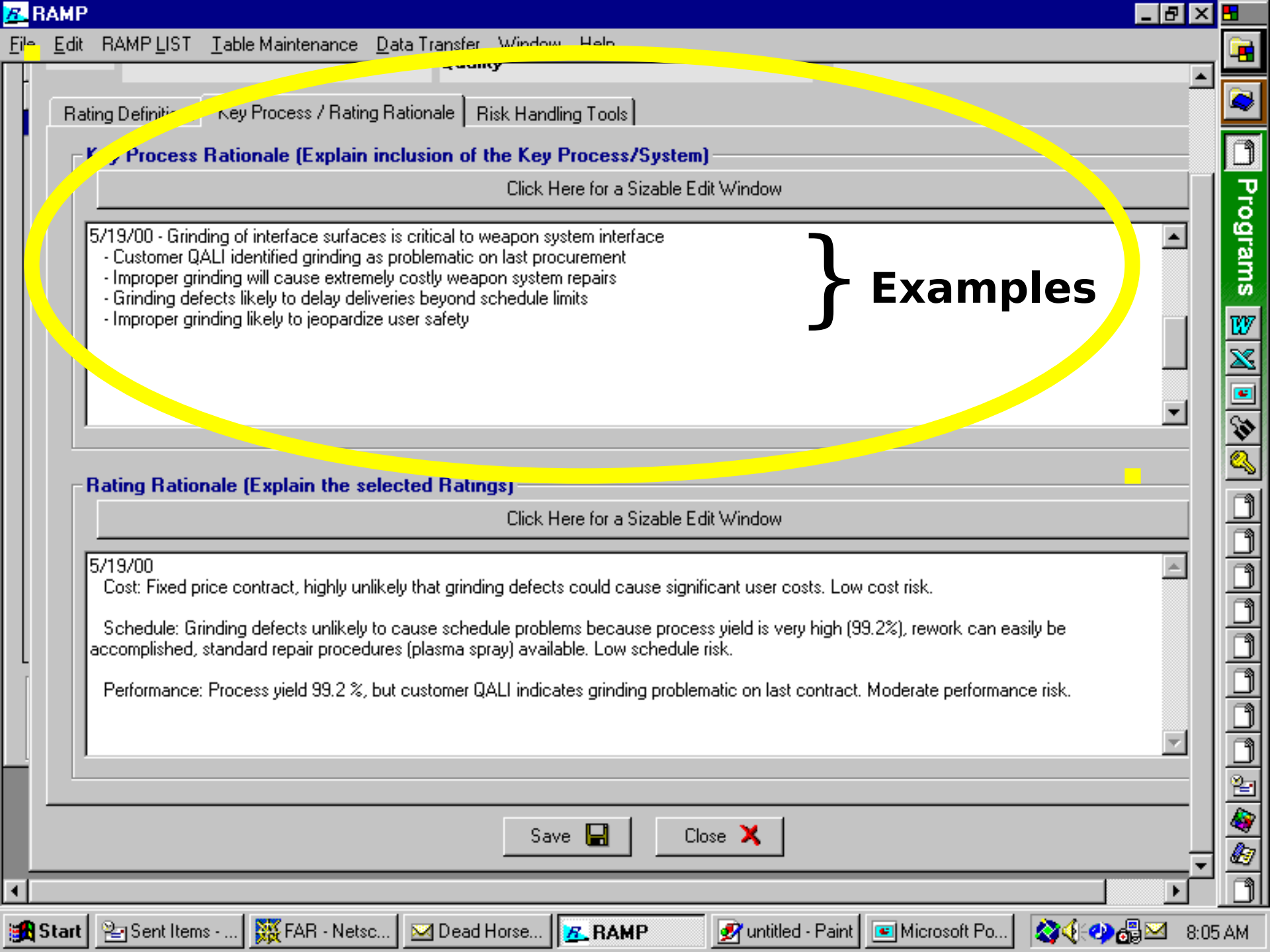
Dead Horse?...

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} Examples

# Risk

## Assessment

- **Example: Grinding Process**
- **Initial May 00 Considerations**
  - **Cost:** Fixed price contract, highly unlikely that grinding defects could cause significant user costs. **Low** cost risk.
  - **Schedule:** Grinding defects unlikely to cause schedule problems because process yield is very high (99.2%), rework can easily be accomplished, standard repair procedures (plasma spray) available. **Low** schedule risk.
  - **Performance:** Process yield 99.2 %, but ~~customer QALI indicates grinding problematic on last contract.~~ **Moderate** performance risk.
- **Example of a Risk Rating Change:**  
Grinding process yield of 62% during July. High

Rating Definitions

Key Process / Rating Rationale

Risk Handling Tools

## Performance

## Schedule

## Cost

High

# Product technical performance requirements continually fail acceptance criteria.  
# Process is performing in an uncontrolled state.  
# Low process yields with significant room for improvement  
# Ineffective corrective action to

# Product/process integrity impacts schedule

# Contract cost increase is likely

Moderate

# Process yields indicate opportunities for improvement  
# Occasional inspection escapes from contractor inspection/testing program  
# Evidence of "hidden factory" rework is inherent within the process  
# DCMC product audits result in

# Product/process integrity is compromised. Likely impact to schedule

# Potential impact to contract cost due to scrap, rework, repair, waiver or deviation costs

Low

# Very high process yields  
# Few inspection escapes from contractor inspection/testing program  
# Contractor detects and corrects virtually all non-conformances produced  
# Contractor takes effective corrective action to eliminate cause

# Product/process integrity acceptable with no impact to schedule

# Minimal/no cost impact

Last Update 6/20/00 8:00:55 AM

Reviewed by: Unassigned

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Rating Definitions

Key Process / Rating Rationale

Risk Handling Tools

**Key Process Rationale (Explain inclusion of the Key Process/System)**

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5/19/00 - Grinding of interface surfaces is critical to weapon system interface

- Customer QALI identified grinding as problematic on last procurement
- Improper grinding will cause extremely costly weapon system repairs
- Grinding defects likely to delay deliveries beyond schedule limits
- Improper grinding likely to jeopardize user safety

**Rating Rationale (Explain the selected Ratings)**

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5/19/00

Cost: Fixed price contract, highly unlikely that grinding defects could cause significant user costs. Low cost risk.

Schedule: Grinding defects unlikely to cause schedule problems because process yield is very high (99.2%), rework can easily be accomplished, standard repair procedures (plasma spray) available. Low schedule risk.

Performance: Process yield 99.2 %, but customer QALI indicates grinding problematic on last contract. Moderate performance risk.

Save



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- **Example: Grinding Process - High Risk Rating**
  - **Process Proofing-** Complete by Aug 15
  - **Product Audits-** Dimensional inspection of 20 units per week (weekly lot size =160, Squelia, 1.0 AQL), randomly selected, after final grind; on sample units, must inspect all dimensional characteristics drawn from/to ground surface(s)
  - **Data Analysis-** Data collected weekly; thorough analysis conducted by the 15th day of each month



Rating Definitions Key Process / Rating Rationale Risk Handling Tools

	Tool	Intensity	Schedule	Frequency
▶	Process Proofing	not applicable	Complete by 8/15/00	One time
	Product Audits	20 per week	Any workday	Weekly
	Data Analysis	not applicable	15th day of each month	Monthly
	Corrective Action	as required	as required	as required
*				

## Risk Handling Details

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## Grinding Process:

Process Proofing- Complete by Aug 15  
Product Audits- Dimensional inspection of 20 units per week (weekly lot size =160, Squelia, 1.0 AQL), randomly selected, after final grind; on sample units, must inspect all dimensional characteristics drawn from/to ground surface(s)  
Data Analysis- Data collected weekly; thorough analysis conducted by the 15th day of each month

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Overall One Book Chapter Ratings - Supplier Quality Assurance - Product Quality

Performance

Schedule

Cost

In Process

In Process

In Process

Narrative

Expand

Key Process / System Ratings			Ratings			
Key Process /	Contract	Risk	Per	Sch	Cst	Details
Alignment/phasin			IP	IP	IP	Rate
Annealing			IP	IP	IP	Rate
Bending			IP	IP	IP	Rate
Brazing			IP	IP	IP	Rate
Continuity			IP	IP	IP	Rate
Final Inspection			IP	IP	IP	Rate
Grinding		R	M	L	L	Rate
PackagingBendin			IP	IP	IP	Rate
Radiography			IP	IP	IP	Rate
Tensile Test			IP	IP	IP	Rate
Welding			IP	IP	IP	Rate
*						

# Risk

## Monitoring

- **Example: Grinding Process - High Risk Rating**

- **November Risk Monitoring**

- **Process Proofing-** Satisfactorily completed (Aug)

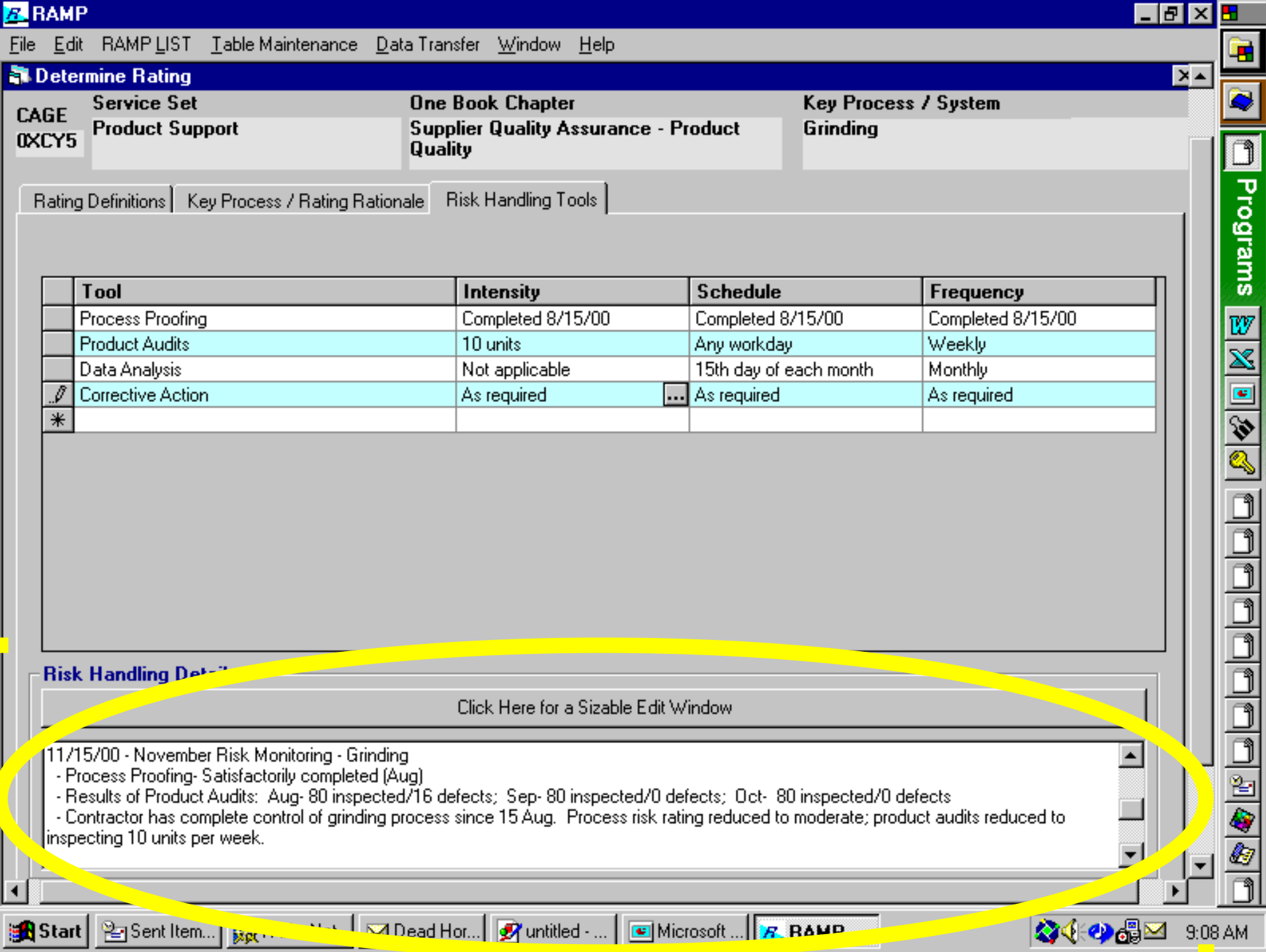
- **Results of Product Audits**

- Aug- 80 inspected/16 defects
- Sep- ~~80 inspected/0 defects~~
- Oct- 80 inspected/0 defects

- **Example of Risk Monitoring**

**Adjustment**

Contractor has complete control of grinding



# Risk

## Documentation

- Required for risk planning, assessment, handling, & monitoring.

- Reassessments/changes

- A method of communicating

- Buying offices
- Supervisors
- IOA Teams

